



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,279	04/21/2005	Dieter Hermeling	29827/41149	8528
4743 7590 10/29/2007 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER STEELE, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			10/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/532,279

## Applicant(s)

HERMELING ET AL.

## Examiner

Jennifer Steele

## Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claim 1-5, 9-18, and 21-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Whitmore (WO 01/56625) in view of Aberson et al (US 4,186,165). Examiner makes one correction to the previous office action as to the following pressure: "Whitmore teaches preparing the web sample by compressing the fabrics in a Carver Laboratory Press Model #2697 at a top platen heated to 50°C and 7000 psi (483 bar) in order to prepare the fabric for measuring the FSEV (pg. 31, lines 33-39)." Examiner will replace the reference to 483 bar to 5.5 bar as noted by applicant in arguments.

Whitmore teaches absorbent articles and processes for making absorbent articles (ABST). Whitmore teaches a process wherein a superabsorbent monomer,

Art Unit: 1794

superabsorbent polymer particles, water and initiator are sprayed onto a fibrous web to form an absorbent article (pg. 3, lines 17-30). This process is considered by Examiner to be in-situ polymerization. Whitmore teaches methods of bonding fibrous webs are known to those skilled in the art and include thermal bonding, point bonding, powder bonding, ultrasonic bonding, chemical bonding, mechanical entanglement and the like (pg 17, lines 25-35). Whitmore teaches pressing the web or compression of the web one or more times during the construction of a disposable article such as a diaper (pg. 26, lines 31-36). Whitmore teaches preparing the web sample by compressing the fabrics in a Carver Laboratory Press Model #2697 at a top platen heated to 50°C and 7000 psi (5.5 bar) in order to prepare the fabric for measuring the FSEV (pg. 31, lines 33-39). As to claims 1-5, and 21, Whitmore differs from the current application and does not teach a pressing temperature of not less than 60°C, 70°C, and 80°C and Whitmore does not teach compression pressure greater than 5.5 bar.

Aberson teaches a method of producing a bonded layer that is formed in a panel of fluffed wood pulp fibers having particulate hydrocolloid material distributed therein wherein the panel is compressed at a suitable pressure and temperature (ABST). Aberson teaches pressure can be produced by platens, calendar rolls, or other means. Aberson teaches by suitably selecting the pressure and the temperature of the compression, an integral, densified, compacted porous, absorbent fibrous layer or region is formed in the panel having relatively high cohesive strength, relatively good capillarity, relatively good shape and volume stability and relatively high fluid retention (col. 2, lines 8-15). Aberson teaches platen temperatures of 80°F to 210°F (col. 2, lines

Art Unit: 1794

43-46) wherein one platen has a higher temperature than the other. Aberson teaches temperatures of 170°F to 210°F (77-99°C) produce the strongest densified bonded layer. Aberson teaches compression pressures in a range of 2 kg/cm<sup>2</sup> to 15 kg/cm<sup>2</sup> (equivalent to 2 bar – 14.7 bar). Aberson refers to this process as a heat induced densified bonded layer (col. 2, lines 47-50). Aberson teaches when compaction was carried out at an elevated temperature changes in pressure significantly effected the formation of the densified bonded layer. However changes in compaction pressure had little effect when carried out at room temperature (col. 7, lines 28-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the process temperature and pressures when producing an absorbent panel motivated by Aberson's teachings that the combination of heat and pressure provides better properties for cohesive strength, fluid retention, shape and volume stability and capillary action that are required in an absorbent panel.

As to claims 6-8, Whitmore differs from the current application and does not teach a material that expands not less than 5-fold and not less than 10 fold in one dimension and by less than 20% in the other two dimensions on the addition of water. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02

As to claim 9, Whitmore teaches a web density of 0.005 to about 0.12 gm/cm.

As to claims 10 and 11, Whitmore teaches a Free Swell Capacity (FSC) that is measure of the ratio of teabag to retention in 0.9% NaCl (pg. 31, lines 1-31). Whitmore presents results of FCS in Table 2, page 21 wherein the same FSC is 5101 and 5669 compared to 605 of the untreated fabric.

As to claims 12, Whitmore does not teach dimensional stability, however WO'625 teaches that "certain web materials are subjected to compression at one or more times during the construction" and further teaches that "after the web material has been compressed, there is a tendency for the fibers to relax, and expand somewhat thereby increasing the thickness of the web. However, this relaxation phenomenon is much less pronounced in articles prepared in accordance with the present invention which tend to remain stably in a compact state until subjected to an insult of fluid" (page 26, lines 31-41). When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02

As to claims 13-16, Whitmore teaches the performance properties of FSEV and EVUL and teaches the methods or measuring these properties (pg 26, lines 15-20). Whitmore teaches the untreated and treated (pressed and heated fabric) and the effect on FSEV and EVUL in tables 3 and 4. Whitmore teaches that the change in FSEV and EVUL after 60 secs and 2 minutes is at least double and 60% higher than that of an uncompressed material (pg. 33 and pg 34).

As to claim 17, Whitmore teaches an AAP at 0.7 psi in 0.9% NaCl solution is greater than 5 g/g.

As to claims 23 and 24, Whitmore teaches methods for absorbing fluids, on page 30 and 31. Whitmore describes methods for measuring absorption of fluids under load (AUL) and free swell capacity absorption.

2. Claim 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Whitmore (WO 01/56625) in view of Soerens (US 7115321). The claims have not been amended and therefore the previous Office Action Rejection of 5/17/2007 is maintained.

### ***Response to Arguments***

1. Applicant's arguments with respect to claim 1-18 and 21-24 have been considered but are moot in view of the new ground(s) of rejection. The previous 35 USC 102/103 rejection with respect to Whitmore has been withdrawn and new 35 USC 103(a) rejection with respect to Whitmore in view of Aberson present in this office action.

2. Applicants argue that the material disclosed in the prior art of WO 01/56625, referred to as WO'625, does not meet, anticipate or render obvious the current application because the material of WO'625 expands from a compressed thickness of 0.67 mm to a thickness of 1.5 mm over 2 weeks and further expands to a thickness of 2.4 mm over 8 weeks. The material disclosed in WO'625 does not teach dimensional stability, however WO'625 teaches that "certain web materials are subjected to compression at one or more times during the construction" and further teaches that

"after the web material has been compressed, there is a tendency for the fibers to relax, and expand somewhat thereby increasing the thickness of the web. However, this relaxation phenomenon is much less pronounced in articles prepared in accordance with the present invention which tend to remain stably in a compact state until subjected to an insult of fluid" (page 26, lines 31-41). In the following paragraph, WO'625, states that each of these factors are easily controlled and maybe optimized to achieve the desired performance (page 27, lines 19-22). With respect to Applicant's arguments, the rationale to modify the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

3. Applicant's current specification cites on page 9 of the current application, dimensional stability data. "In the case of the comparative material produced according to WO'625, in contrast, an expansion of the material took place under the abovementioned conditions:" In each of the four samples the thickness after 60 days was 2-3 times greater than the starting thickness of 0.7 and 0.8 mm. However, the Applicant's specification does not disclose the process conditions utilized when the samples were produced and it is not entirely clear that the samples are made of the process of WO'625. Applicant does not disclose dimensional stability data for the materials produced by the Applicant's at the process conditions claimed of greater than



Art Unit: 1794

3 bar and greater than 60°C. In the absence of comparative data for the dimensional stability versus the specific process conditions for the materials produced of WO'625 and the current application, the invention of WO'625 presents a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results. The teachings of WO'625 show a finding that the application of compression and temperature to the SAP web results in a thinner yet absorbent web. Applicant is claiming unexpected results at specific process conditions. However, there is no comparison data for dimensional stability showing that the specific process conditions yield the specific dimensional stability as claimed. The prior art of WO'625 does not disclose dimensional stability for the product of WO'625. The present application discloses dimensional stability data for the product of WO'625 however does not disclose dimensional stability data with respect to the material produced of the process of the current application. In the absence of a showing of unexpected results, the prior art teaches that the application of pressure and temperature to the web provides a thinner yet absorbent product that has less expansion upon relaxation. The burden is on the Applicant to show an unobvious difference between the process of WO'625 and the current application.

4. Applicants provide comparative data with respect to the FSEV and EVUL for the material of WO'625 versus the material produced by the process of the current application. Applicants state that the values are unexpectedly high for the presently claimed. Applicant makes note that the data is also dependent on the time (recited in seconds) that the compression and temperature are applied to the material. Applicants

Art Unit: 1794

further explain that at 80 bar and 150°C and 10 seconds, the sample as the same results as prior art. With respect to the fact that the time appears to impact the results of the final product and time recited in the claims as a process variable, this argument is not commensurate with the scope of the claims.

5. Applicant argues that Claim 21 is a process claim and not a product by process claim and is neither anticipated by nor obvious over the teachings of WO'625.

Examiner has provided new grounds of rejection providing evidence that a process of compression and heat were known in the art at the time the invention was made.

However, wherein claim 21 recites a process for producing a material by pressing at about 60°C and about 3 bar, WO'625 teaches 50°C which can be about 60°C and WO'625 teaches 5.5 bar which can be of about 3 bar. "In considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968) MPEP 2144.01

6. Applicant's arguments with respect to WO'625 in view of Soerens et al, are not persuasive. As Applicant argues that WO'625 reference does not anticipate and render obvious the current application, Applicant argues Soerens does not overcome the deficiencies of WO'625. Soerens is relied upon to teach a method for absorbing water vapor and provides a finding that one of ordinary skill in the art could have pursued the known potential options with a reasonable expectation of success.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Steele whose telephone number is (571) 272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S./

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

10/22/2007